



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

CINCINNATI, OHIO 45268

Office of Ground Water and Drinking Water

February 6, 2015

Re: UCMR3 Data Report

MAR 02 2015

Dear UCMR Contact:

Enclosed you will find the data resulting from the analyses of samples collected under the third cycle of the Unregulated Contaminant Monitoring Regulation (UCMR3). The information presented should be self-explanatory, but there are clarifying points in the footnotes of the data report.

A copy of these results has been sent to your state. Please remember that if you are a community water system (CWS), then any positive results (i.e., results at or above the minimum reporting levels) must be reported in your Consumer Confidence Report (CCR). All systems must notify persons they serve of the availability of UCMR results.

EPA's Technical Support Center has reviewed all the quality control checks associated with these results. Should you have any questions concerning these results, please contact our implementation support contractor, Great Lakes Environmental Center (GLEC), at 1-800-949-1581 within 30 days of receiving this letter. Thereafter, these data will be considered final and will be forwarded to EPA's National Contaminant Drinking Water Occurrence Database (NCOD). Thank you for your continued cooperation with UCMR3.

Sincerely,

A handwritten signature in black ink, which appears to read "Gregory J. Carroll", is positioned above the printed name.

Gregory J. Carroll, Director
Technical Support Center

Enclosure

2015.05

Unregulated Contaminant Monitoring Rule (UCMR3) Data Report Assessment Monitoring

PWS ID/Name	TX1010250	Johnson Space Center
Sample Event Code/Sample Schedule	SE1	March, 2014
Facility ID/Name	90001	DW 43
Sample Point ID/Type/Name	EP001	EP EP from DW 43
Disinfectant Type ¹	CAON	

Sample Kit ID	Method ID	Analyte Name ²	Collection Date	Reported Value ³ (µg/L) ⁴
105962Q	EPA 200.8	chromium	3/3/2014	<0.2
105962Q	EPA 200.8	cobalt	3/3/2014	<1
105962Q	EPA 200.8	germanium	3/3/2014	<1
105962Q	EPA 200.8	manganese	3/3/2014	=7.2
105962Q	EPA 200.8	molybdenum	3/3/2014	=1.9
105962Q	EPA 200.8	strontium	3/3/2014	=220
105962Q	EPA 200.8	tellurium	3/3/2014	<1
105962Q	EPA 200.8	vanadium	3/3/2014	=0.31
105962Q	EPA 218.7	chromium-6	3/3/2014	=0.031
105962Q	EPA 300.1	chlorate	3/3/2014	<20
105962Q	EPA 522	1,4-dioxane	3/3/2014	<0.07
105962Q	EPA 524.3	1,1-dichloroethane	3/3/2014	<0.03
105962Q	EPA 524.3	1,2,3-trichloropropane	3/3/2014	<0.03
105962Q	EPA 524.3	1,3-butadiene	3/3/2014	<0.1
105962Q	EPA 524.3	bromomethane	3/3/2014	<0.2
105962Q	EPA 524.3	chloromethane	3/3/2014	<0.2
105962Q	EPA 524.3	Halon 1011	3/3/2014	<0.06
105962Q	EPA 524.3	HCFC-22	3/3/2014	<0.08
105962Q	EPA 524.3	n-propylbenzene	3/3/2014	<0.03
105962Q	EPA 524.3	sec-butylbenzene	3/3/2014	<0.04
105962Q	EPA 537	PFBS	3/3/2014	<0.09
105962Q	EPA 537	PFHpA	3/3/2014	<0.01
105962Q	EPA 537	PFHxS	3/3/2014	<0.03
105962Q	EPA 537	PFNA	3/3/2014	<0.02
105962Q	EPA 537	PFOA	3/3/2014	<0.02
105962Q	EPA 537	PFOS	3/3/2014	<0.04

Unregulated Contaminant Monitoring Rule (UCMR3) Data Report Assessment Monitoring

Facility ID/Name	99001	Distribution System
Sample Point ID/Type/Name	MR001	MR Building #15
Disinfectant Type ¹	CAON	

Sample Kit ID	Method ID	Analyte Name ²	Collection Date	Reported Value ³ (µg/L) ⁴
305878P	EPA 200.8	chromium	3/3/2014	<0.2
305878P	EPA 200.8	cobalt	3/3/2014	<1
305878P	EPA 200.8	germanium	3/3/2014	<1
305878P	EPA 200.8	manganese	3/3/2014	=4.7
305878P	EPA 200.8	molybdenum	3/3/2014	=2
305878P	EPA 200.8	strontium	3/3/2014	=240
305878P	EPA 200.8	tellurium	3/3/2014	<1
305878P	EPA 200.8	vanadium	3/3/2014	=0.29
305878P	EPA 218.7	chromium-6	3/3/2014	=0.034
305878P	EPA 300.1	chlorate	3/3/2014	=43

¹Disinfectant types were collected for EPA Method 300.1: Gaseous Chlorine (CLGA), Offsite Generated Hypochlorite (CLOF), Onsite Generated Hypochlorite (CLON), Chloramine-formed from gaseous chlorine (CAGC), Chloramine-formed from offsite hypochlorite (CAOF), Chloramine-formed from onsite hypochlorite (CAON), Chlorine Dioxide (CLDO), Ozone (OZON), Ultraviolet Light (ULVL), Other (OTHD), No Disinfectant Used (NODU).

²In addition to reporting occurrence data for UCMR3 target analytes, EPA tasked its small-system contract-support laboratories with reporting results for sec-butylbenzene, n-propylbenzene, tellurium, germanium, and manganese. These additional unregulated analytes are within the scope of the methods already being performed for the UCMR analytes. The CCR reporting requirement does not apply to these additional analytes.

³Results less than the minimum reporting level (MRL) are displayed with a less than sign (<) and the MRL. Reported values equal to or greater than the MRL are displayed with an equal sign (=) and the reported value from the laboratory. No data reportable (NDR) indicates that EPA could not obtain valid data for this contaminant during the scheduled sampling event.

⁴A detection of a UCMR3 analyte above the MRL does not represent cause for concern, in itself. The implications of the detection should be judged considering health effects information, which is often still under development or being refined for unregulated contaminants. For more information on occurrence data consult "UCMR 3 Data Considerations, Definitions, Reference Concentrations and Summary PDF" at <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/data.cfm#ucmr2013>.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

CINCINNATI, OHIO 45268

Office of Ground Water and Drinking Water

NOV 17 2015

Rec'd SE

October 2, 2015

Re: UCMR3 Data Report

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A copy of these results has been sent to your state. Please remember that if you are a community water system (CWS), then any positive results (i.e., results at or above the minimum reporting levels) must be reported in your Consumer Confidence Report (CCR). All systems must notify persons they serve of the availability of UCMR results.

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Sincerely,

Gregory J. Carroll, Director
Technical Support Center

Enclosure

Unregulated Contaminant Monitoring Rule (UCMR3) Data Report Assessment Monitoring

PWS ID/Name	TX1010250	Johnson Space Center
Sample Event Code/Sample Schedule	SE2	June, 2014
Facility ID/Name	90001	DW 43
Sample Point ID/Type/Name	EP001	EP EP from DW 43
Disinfectant Type ¹	CAON	

Sample Kit ID	Method ID	Analyte Name ²	Collection Date	Reported Value ³ (µg/L) ⁴
107631P	EPA 200.8	chromium	6/9/2014	<0.2
107631P	EPA 200.8	cobalt	6/9/2014	<1
107631P	EPA 200.8	germanium	6/9/2014	<1
107631F	EPA 200.8	manganese	6/9/2014	=9.4
107631P	EPA 200.8	molybdenum	6/9/2014	=1.8
107631P	EPA 200.8	strontium	6/9/2014	=250
107631P	EPA 200.8	tellurium	6/9/2014	<1
107631F	EPA 200.8	vanadium	6/9/2014	=0.4
107631F	EPA 218.7	chromium-6	6/9/2014	=0.05
107631P	EPA 300.1	chlorate	6/9/2014	<20
107631P	EPA 522	1,4-dioxane	6/9/2014	<0.07
107631P	EPA 524.3	1,1-dichloroethane	6/9/2014	<0.03
107631P	EPA 524.3	1,2,3-trichloropropane	6/9/2014	<0.03
107631P	EPA 524.3	1,3-butadiene	6/9/2014	<0.1
107631P	EPA 524.3	bromomethane	6/9/2014	<0.2
107631P	EPA 524.3	chloromethane	6/9/2014	<0.2
107631P	EPA 524.3	Halon 1011	6/9/2014	<0.06
107631P	EPA 524.3	HCFC-22	6/9/2014	<0.08
107631P	EPA 524.3	n-propylbenzene	6/9/2014	<0.03
107631P	EPA 524.3	sec-butylbenzene	6/9/2014	<0.04
107631P	EPA 537	PFBS	6/9/2014	<0.09
107631P	EPA 537	PFHpA	6/9/2014	<0.01
107631P	EPA 537	PFHxS	6/9/2014	<0.03
107631P	EPA 537	PFNA	6/9/2014	<0.02
107631P	EPA 537	PFOA	6/9/2014	<0.02
107631P	EPA 537	PFOS	6/9/2014	<0.04

Unregulated Contaminant Monitoring Rule (UCMR3) Data Report Assessment Monitoring

Facility ID/Name	99001	Distribution System
Sample Point ID/Type/Name	MR001	MR Building #15
Disinfectant Type ¹	CAON	

Sample Kit ID	Method ID	Analyte Name ²	Collection Date	Reported Value ³ (µg/L) ⁴
307705P	EPA 200.8	chromium	6/9/2014	<0.2
307705P	EPA 200.8	cobalt	6/9/2014	<1
307705P	EPA 200.8	germanium	6/9/2014	<1
307705P	EPA 200.8	manganese	6/9/2014	=8
307705P	EPA 200.8	molybdenum	6/9/2014	=1.8
307705P	EPA 200.8	strontium	6/9/2014	=240
307705P	EPA 200.8	tellurium	6/9/2014	<1
307705P	EPA 200.8	vanadium	6/9/2014	=0.33
307705P	EPA 218.7	chromium-6	6/9/2014	=0.044
307705P	EPA 300.1	chlorate	6/9/2014	=260

¹Disinfectant types were collected for EPA Method 300.1: Gaseous Chlorine (CLGA), Offsite Generated Hypochlorite (CLOF), Onsite Generated Hypochlorite (CLON), Chloramine-formed from gaseous chlorine (CAGC), Chloramine-formed from offsite hypochlorite (CAOF), Chloramine-formed from onsite hypochlorite (CAON), Chlorine Dioxide (CLDO), Ozone (OZON), Ultraviolet Light (ULVL), Other (OTHD), No Disinfectant Used (NODU).

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Unregulated Contaminant Monitoring Rule (UCMR3) Data Report

Assessment Monitoring

PWS ID/Name	TX1010250	Johnson Space Center
Sample Event Code/Sample Schedule	SE3	September, 2014
Facility ID/Name	90001	DW 43
Sample Point ID/Type/Name	EP001	EP EP from DW 43
Disinfectant Type ¹	CAON	

Sample Kit ID	Method ID	Analyte Name ²	Collection Date	Reported Value ³ (µg/L) ⁴
109109Q	EPA 200.8	chromium	9/15/2014	<0.2
109109Q	EPA 200.8	cobalt	9/15/2014	<1
109109Q	EPA 200.8	germanium	9/15/2014	<1
109109Q	EPA 200.8	manganese	9/15/2014	=4.25
109109Q	EPA 200.8	molybdenum	9/15/2014	=1.8
109109Q	EPA 200.8	strontium	9/15/2014	=271
109109Q	EPA 200.8	tellurium	9/15/2014	<1
109109Q	EPA 200.8	vanadium	9/15/2014	=0.619
109837R	EPA 218.7	chromium-6	11/25/2014	=0.124
109109Q	EPA 300.1	chlorate	9/15/2014	<20
109109Q	EPA 522	1,4-dioxane	9/15/2014	<0.07
109109Q	EPA 524.3	1,1-dichloroethane	9/15/2014	<0.03
109109Q	EPA 524.3	1,2,3-trichloropropane	9/15/2014	<0.03
109109Q	EPA 524.3	1,3-butadiene	9/15/2014	<0.1
109109Q	EPA 524.3	bromomethane	9/15/2014	<0.2
109109Q	EPA 524.3	chloromethane	9/15/2014	<0.2
109109Q	EPA 524.3	Halon 1011	9/15/2014	<0.06
109109Q	EPA 524.3	HCFC-22	9/15/2014	<0.08
109109Q	EPA 524.3	n-propylbenzene	9/15/2014	<0.03
109109Q	EPA 524.3	sec-butylbenzene	9/15/2014	<0.04
109109Q	EPA 537	PFBS	9/15/2014	<0.09
109109Q	EPA 537	PFHpA	9/15/2014	<0.01
109109Q	EPA 537	PFHxS	9/15/2014	<0.03
109109Q	EPA 537	PFNA	9/15/2014	<0.02
109109Q	EPA 537	PFOA	9/15/2014	<0.02
109109Q	EPA 537	PFOS	9/15/2014	<0.04

Unregulated Contaminant Monitoring Rule (UCMR3) Data Report

Assessment Monitoring

Facility ID/Name	99001	Distribution System
Sample Point ID/Type/Name	MR001	MR Building #15
Disinfectant Type ¹	CAON	

Sample Kit ID	Method ID	Analyte Name ²	Collection Date	Reported Value ³ (µg/L) ⁴
309177P	EPA 200.8	chromium	9/15/2014	<0.2
309177P	EPA 200.8	cobalt	9/15/2014	<1
309177P	EPA 200.8	germanium	9/15/2014	<1
309177P	EPA 200.8	manganese	9/15/2014	=3.86
309177P	EPA 200.8	molybdenum	9/15/2014	=1.82
309177P	EPA 200.8	strontium	9/15/2014	=264
309177P	EPA 200.8	tellurium	9/15/2014	<1
309177P	EPA 200.8	vanadium	9/15/2014	=0.627
309838R	EPA 218.7	chromium-6	11/25/2014	=0.143
309177P	EPA 300.1	chlorate	9/15/2014	=148

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CINCINNATI, OHIO 45268

Office of Ground Water and Drinking Water

December 23, 2015

JAN 25 2016
Rec'd SE

Re: UCMR3 Data Report

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Sincerely,

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Gregory J. Carroll, Director
Technical Support Center

Enclosure

2016.004

Unregulated Contaminant Monitoring Rule (UCMR3) Data Report Assessment Monitoring

PWS ID/Name	TX1010250	Johnson Space Center
Sample Event Code/Sample Schedule	SE4	December, 2014
Facility ID/Name	90001	DW 43
Sample Point ID/Type/Name	EP001	EP EP from DW 43
Disinfectant Type ¹	CAOF	

Sample Kit ID	Method ID	Analyte Name ²	Collection Date	Reported Value ³ (µg/L) ⁴
110752F	EPA 200.8	chromium	12/8/2014	<0.2
110752F	EPA 200.8	cobalt	12/8/2014	<1
110752F	EPA 200.8	germanium	12/8/2014	<1
110752F	EPA 200.8	manganese	12/8/2014	=4.703
110752F	EPA 200.8	molybdenum	12/8/2014	=2.115
110752F	EPA 200.8	strontium	12/8/2014	=279.205
110752F	EPA 200.8	tellurium	12/8/2014	<1
110752F	EPA 200.8	vanadium	12/8/2014	=0.277
110752P	EPA 218.7	chromium-6	12/8/2014	=0.03
110752P	EPA 300.1	chlorate	12/8/2014	<20
110752P	EPA 522	1,4-dioxane	12/8/2014	<0.07
110752P	EPA 524.3	1,1-dichloroethane	12/8/2014	<0.03
110752P	EPA 524.3	1,2,3-trichloropropane	12/8/2014	<0.03
110752P	EPA 524.3	1,3-butadiene	12/8/2014	<0.1
110752P	EPA 524.3	bromomethane	12/8/2014	<0.2
110752P	EPA 524.3	chloromethane	12/8/2014	<0.2
110752P	EPA 524.3	Halon 1011	12/8/2014	<0.06
110752P	EPA 524.3	HCFC-22	12/8/2014	<0.08
110752P	EPA 524.3	n-propylbenzene	12/8/2014	<0.03
110752P	EPA 524.3	sec-butylbenzene	12/8/2014	<0.04
110752P	EPA 537	PFBS	12/8/2014	<0.09
110752P	EPA 537	PFHpA	12/8/2014	<0.01
110752P	EPA 537	PFHxS	12/8/2014	<0.03
110752P	EPA 537	PFNA	12/8/2014	<0.02
110752P	EPA 537	PFOA	12/8/2014	<0.02
110752P	EPA 537	PFOS	12/8/2014	<0.04

Unregulated Contaminant Monitoring Rule (UCMR3) Data Report Assessment Monitoring

Facility ID/Name	99001	Distribution System
Sample Point ID/Type/Name	MR001	MR Building #15
Disinfectant Type ¹	CAON	

Sample Kit ID	Method ID	Analyte Name ²	Collection Date	Reported Value ³ (µg/L) ⁴
310824P	EPA 200.8	chromium	12/8/2014	<0.2
310824P	EPA 200.8	cobalt	12/8/2014	<1
310824P	EPA 200.8	germanium	12/8/2014	<1
310824P	EPA 200.8	manganese	12/8/2014	=6.67
310824P	EPA 200.8	molybdenum	12/8/2014	=2.08
310824P	EPA 200.8	strontium	12/8/2014	=305
310824P	EPA 200.8	tellurium	12/8/2014	<1
310824P	EPA 200.8	vanadium	12/8/2014	=0.265
310824P	EPA 218.7	chromium-6	12/8/2014	<0.03
310824P	EPA 300.1	chlorate	12/8/2014	=214

¹Disinfectant types were collected for EPA Method 300.1: Gaseous Chlorine (CLGA), Offsite Generated Hypochlorite (CLOF), Onsite Generated Hypochlorite (CLON), Chloramine-formed from gaseous chlorine (CAGC), Chloramine-formed from offsite hypochlorite (CAOF), Chloramine-formed from onsite hypochlorite (CAON), Chlorine Dioxide (CLDO), Ozone (OZON), Ultraviolet Light (ULVL), Other (OTHD), No Disinfectant Used (NODU).

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FACT SHEET

PFOA & PFOS Drinking Water Health Advisories

Overview

EPA has established health advisories for PFOA and PFOS based on the agency's assessment of the latest peer-reviewed science to provide drinking water system operators, and state, tribal and local officials who have the primary responsibility for overseeing these systems, with information on the health risks of these chemicals, so they can take the appropriate actions to protect their residents. EPA is committed to supporting states and public water systems as they determine the appropriate steps to reduce exposure to PFOA and PFOS in drinking water. As science on health effects of these chemicals evolves, EPA will continue to evaluate new evidence.

Background on PFOA and PFOS

PFOA and PFOS are fluorinated organic chemicals that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFASs). PFOA and PFOS have been the most extensively produced and studied of these chemicals. They have been used to make carpets, clothing, fabrics for furniture, paper packaging for food and other materials (e.g., cookware) that are resistant to water, grease or stains. They are also used for firefighting at airfields and in a number of industrial processes.

Because these chemicals have been used in an array of consumer products, most people have been exposed to them. Between 2000 and 2002, PFOS was voluntarily phased out of production in the U.S. by its primary manufacturer. In 2006, eight major companies voluntarily agreed to phase out their global production of PFOA and PFOA-related chemicals, although there are a limited number of ongoing uses. Scientists have found PFOA and PFOS in the blood of nearly all the people they tested, but these studies show that the levels of PFOA and PFOS in blood have been decreasing. While consumer products and food are a large source of exposure to these chemicals for most people, drinking water can be an additional source in the small percentage of communities where these chemicals have contaminated water supplies. Such contamination is typically localized and associated with a specific facility, for example, an industrial facility where these chemicals were produced or used to manufacture other products or an airfield at which they were used for firefighting.

EPA's 2016 Lifetime Health Advisories

EPA develops health advisories to provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA's health advisories are non-enforceable and non-regulatory and provide technical information to states agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination. In 2009, EPA published provisional health advisories for PFOA and PFOS based on the evidence available at that time. The science has evolved since then and EPA is now replacing the 2009 provisional advisories with new, lifetime health advisories.

FACT SHEET

PFOA & PFOS Drinking Water Health Advisories

EPA's 2016 Lifetime Health Advisories, continued

To provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water, EPA established the health advisory levels at 70 parts per trillion. When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS should be compared with the 70 parts per trillion health advisory level. This health advisory level offers a margin of protection for all Americans throughout their life from adverse health effects resulting from exposure to PFOA and PFOS in drinking water.

How the Health Advisories were developed

EPA's health advisories are based on the best available peer-reviewed studies of the effects of PFOA and PFOS on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations that have been exposed to PFASs. These studies indicate that exposure to PFOA and PFOS over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes).

EPA's health advisory levels were calculated to offer a margin of protection against adverse health effects to the most sensitive populations: fetuses during pregnancy and breastfed infants. The health advisory levels are calculated based on the drinking water intake of lactating women, who drink more water than other people and can pass these chemicals along to nursing infants through breastmilk.

Recommended Actions for Drinking Water Systems

Steps to Assess Contamination

If water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should quickly undertake additional sampling to assess the level, scope and localized source of contamination to inform next steps

Steps to Inform

If water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should promptly notify their State drinking water safety agency (or with EPA in jurisdictions for which EPA is the primary drinking water safety agency) and consult with the relevant agency on the best approach to conduct additional sampling.

Drinking water systems and public health officials should also promptly provide consumers with information about the levels of PFOA and PFOS in their drinking water. This notice should include specific information on the risks to fetuses during pregnancy and breastfed and formula-fed infants from exposure to drinking water with an individual or combined concentration of PFOA and PFOS above EPA's health advisory level of 70 parts per trillion. In addition, the notification should include actions they are taking and identify options that consumers may consider to reduce risk such as seeking an alternative drinking water source, or in the case of parents of formula-fed infants, using formula that does not require adding water.

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PFOA & PFOS Drinking Water Health Advisories

Recommended Actions for Drinking Water Systems, continued

Steps to Limit Exposure

A number of options are available to drinking water systems to lower concentrations of PFOA and PFOS in their drinking water supply. In some cases, drinking water systems can reduce concentrations of perfluoroalkyl substances, including PFOA and PFOS, by closing contaminated wells or changing rates of blending of water sources. Alternatively, public water systems can treat source water with activated carbon or high pressure membrane systems (e.g., reverse osmosis) to remove PFOA and PFOS from drinking water. These treatment systems are used by some public water systems today, but should be carefully designed and maintained to ensure that they are effective for treating PFOA and PFOS. In some communities, entities have provided bottled water to consumers while steps to reduce or remove PFOA or PFOS from drinking water or to establish a new water supply are completed.

Many home drinking water treatment units are certified by independent accredited third party organizations against American National Standards Institute (ANSI) standards to verify their contaminant removal claims. NSF International (NSF®) has developed a protocol for NSF/ANSI Standards 53 and 58 that establishes minimum requirements for materials, design and construction, and performance of point-of-use (POU) activated carbon drinking water treatment systems and reverse osmosis systems that are designed to reduce PFOA and PFOS in public water supplies. The protocol has been established to certify systems (e.g., home treatment systems) that meet the minimum requirements. The systems are evaluated for contaminant reduction by challenging them with an influent of $1.5 \pm 30\%$ µg/L (total of both PFOA and PFOS) and must reduce this concentration by more than 95% to 0.07 µg/L or less (total of both PFOA and PFOS) throughout the manufacturer's stated life of the treatment system. Product certification to this protocol for testing home treatment systems verifies that devices effectively reduces PFOA and PFOS to acceptable levels.

Other Actions Relating to PFOA and PFOS

Between 2000 and 2002, PFOS was voluntarily phased out of production in the U.S. by its primary manufacturer, 3M. EPA also issued regulations to limit future manufacturing, including importation, of PFOS and its precursors, without first having EPA review the new use. A limited set of existing uses for PFOS (fire resistant aviation hydraulic fluids, photography and film products, photomicro lithography process to produce semiconductors, metal finishing and plating baths, component of an etchant) was excluded from these regulations because these uses were ongoing and alternatives were not available.

In 2006, EPA asked eight major companies to commit to working toward the elimination of their production and use of PFOA, and chemicals that degrade to PFOA, from emissions and products by the end of 2015. All eight companies have indicated that they have phased out PFOA, and chemicals that degrade to PFOA, from emissions and products by the end of 2015. Additionally, PFOA is included in EPA's proposed Toxic Substance Control Act's Significant New Use Rule (SNUR) issued in January 2015 which will ensure that EPA has an opportunity to review any efforts to reintroduce the chemical into the marketplace and take action, as necessary, to address potential concerns.

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PFOA & PFOS Drinking Water Health Advisories

Other Actions Relating to PFOA and PFOS, continued

EPA has not established national primary drinking water regulations for PFOA and PFOS. EPA is evaluating PFOA and PFOS as drinking water contaminants in accordance with the process required by the Safe Drinking Water Act (SDWA). To regulate a contaminant under SDWA, EPA must find that it: (1) may have adverse health effects; (2) occurs frequently (or there is a substantial likelihood that it occurs frequently) at levels of public health concern; and (3) there is a meaningful opportunity for health risk reduction for people served by public water systems.

EPA included PFOA and PFOS among the list of contaminants that water systems are required to monitor under the third Unregulated Contaminant Monitoring Rule (UCMR 3) in 2012. Results of this monitoring effort are updated regularly and can be found on the publicly-available National Contaminant Occurrence Database (NCOD) (<https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule#3>). In accordance with SDWA, EPA will consider the occurrence data from UCMR 3, along with the peer reviewed health effects assessments supporting the PFOA and PFOS Health Advisories, to make a regulatory determination on whether to initiate the process to develop a national primary drinking water regulation.

In addition, EPA plans to begin a separate effort to determine the range of PFAS for which an Integrated Risk Information System (IRIS) assessment is needed. The IRIS Program identifies and characterizes the health hazards of chemicals found in the environment. IRIS assessments inform the first two steps of the risk assessment process: hazard identification, and dose-response. As indicated in the 2015 IRIS Multi-Year Agenda, the IRIS Program will be working with other EPA offices to determine the range of PFAS compounds and the scope of assessment required to best meet Agency needs. More about this effort can be found at <https://www.epa.gov/iris/iris-agenda>.

Non-Drinking Water Exposure to PFOA and PFOS

These health advisories only apply to exposure scenarios involving drinking water. They are not appropriate for use, in identifying risk levels for ingestion of food sources, including: fish, meat produced from livestock that consumes contaminated water, or crops irrigated with contaminated water.

The health advisories are based on exposure from drinking water ingestion, not from skin contact or breathing. The advisory values are calculated based on drinking water consumption and household use of drinking water during food preparation (e.g., cooking or to prepare coffee, tea or soup). To develop the advisories, EPA considered non-drinking water sources of exposure to PFOA and PFOS, including: air, food, dust, and consumer products. In January 2016 the Food and Drug Administration amended its regulations to no longer allow PFOA and PFOS to be added in food packaging, which will likely decrease one source of non-drinking water exposure.

Where Can I Learn More?

- EPA's Drinking Water Health Advisories for PFOA and PFOS can be found at: <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos>
- PFOA and PFOS data collected under EPA's Unregulated Contaminant Monitoring Rule are available: <https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule>
- EPA's stewardship program for PFAS related to TSCA: <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/and-polyfluoroalkyl-substances-pfas-under-tsca>
- EPA's research activities on PFASs can be found at: <http://www.epa.gov/chemical-research/perfluorinated-chemical-pfc-research>
- The Agency for Toxic Substances and Disease Registry's Perfluorinated Chemicals and Your Health webpage at: <http://www.atsdr.cdc.gov/PFC/>

